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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/322,708	05/28/1999	KIRK DOW SANDERS	81862.P125	8389

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EXAMINER	
HO, DUC CHI	

ART UNIT	PAPER NUMBER
2665	13

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/322,708	SANDERS ET AL.	
	Examiner	Art Unit	
	Duc C Ho	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 January 1937*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10-37* is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 1-9 are withdrawn in view of the newly discovered reference(s) to Pitroda et al. (US 4,149,038), and Hilton et al. (US 6,185,594). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Pitroda et al.(US 4,149,038), hereinafter referred as Pitroda.

Pitroda discloses a method and apparatus for fault detection in PCM multiplexed system.

receiving a time division multiplexed (TDM) stream on an input of the transmission system, wherein the TDM stream comprises a plurality of data fields (busy data channels) *and a plurality of unused fields* (idle channels) (a logic circuit 47-fig. 3 for receiving a TDM stream including busy data channels and idle channels, see col. 11, lines 23-25);

inserting test data in one or more of the plurality unused fields of the TDM stream using a logic circuit (circuit 47-fig. 3 inserts bit patterns (all "0's" and all "1's" patters) into idle channels (col. 13, lines 33-41))

transferring the TDM stream along a plurality of components of the transmission system, and back to the logic circuit (transfer the TDM from circuit 47 through a plurality channels (col. 13, lines 33-41) and transfer the TDM from circuit 47 through a plurality of components (mux/demux and switching network shown in fig. 2) and back to circuit 47 (col. 14, lines 35-42)).

comparing the test data against the transferred data using the logic circuit (Circuit 47 compares the all "0's" or all "1's" patterns with the received test patterns (col. 15, lines 5-34). The comparison is performed by the comparator 322 (figure 4) in circuit 47 as described in col. 22, lines 60-66).

Regarding claim 2, the connection path for transferring the TDM stream in the Pitroda is the mux/demux and switching network shown in fig. 2.

Regarding claim 3, one or more of the idle channels is(are) used in the connection path for transferring the TDM stream, see fig. 2.

Regarding claim 4, the transferred test data prior to comparing stored in the register 304, see col. 22-line 56 to col. 23-line 15.

Regarding claim 5, generating an error bit is equivalent to the claimed limitation of generating an error flag, see col. 22-line 56 to col. 23-line 15.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Pitroda, in view of Hilton et al. (US 6,185,594), hereinafter referred to as Hilton.

Pitroda discloses a method and apparatus for fault detection in PCM multiplexed system.

receiving a time division multiplexed (TDM) stream on an input of the transmission system, wherein the TDM stream comprises a plurality of data fields (busy data channels) *and a plurality of unused fields* (idle channels) (a logic circuit 47-fig. 3 for receiving a TDM stream including busy data channels and idle channels, see col. 11, lines 23-25);

inserting test data in one or more of the plurality unused fields of the TDM stream using a logic circuit (circuit 47-fig. 3 inserts bit patterns (all "0's" and all "1's" patters) into idle channels (col. 13, lines 33-41))

transferring the TDM stream along a plurality of components of the transmission system, and back to the logic circuit (transfer the TDM from circuit 47 through a plurality channels (col. 13, lines 33-41) and transfer the TDM from circuit 47 through a plurality of components (mux/demux and switching network shown in fig. 2) and back to circuit 47 (col. 14, lines 35-42)).

comparing the test data against the transferred data using the logic circuit (Circuit 47 compares the all "0's" or all "1's" patterns with the received test patterns (col. 15, lines 5-34). The comparison is performed by the comparator 322 (figure 4) in circuit 47 as described in col. 22, lines 60-66).

Pitroda, however, doesn't specifically teach generating a test signal, wherein the test signal is generated by the DSP.

One skilled in the art would recognize the advantage of using a test signal generated by a Digital Signal Processing (DSP) chip.

Hilton discloses a versatile signal generator. In Hilton, DSP chips are capable of generating test signals, see col. 2, lines 33-42.

It would have been obvious to one of ordinary skill in the art, at the time invention was made, to employ the DSP chip for generating test signals as taught by Hilton into the system of Pitroda since the DSP chip can accept a real time input signal and to produce a real time digitally modulated signal, and therefore the combination system of Pitroda and Hilton would provide an efficient model for precisely testing a transmission system with real world conditions as well as known signals that conform to industry standard.

Regarding claim 7, in Pitroda, the connection path for transferring the TDM stream in the Pitroda is the mux/demux and switching network shown in fig. 2.

Regarding claim 8, in Pitroda one or more of the idle channels is(are) used in the connection path for transferring the TDM stream, see fig. 2.

Regarding claim 9, in Pitroda generating an error bit is equivalent to the claimed limitation of generating an error flag, see col. 22-line 56 to col. 23-line 15.

Allowable Subject Matter

8. Claims 10-37 are allowed.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (703) 305-1332. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11. Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA, Sixth Floor (Receptionist).

Patent Examiner

Duc Ho

03-31-04